

Technical College of Sydney, like many similar institutions in this country, has grown up out of the Sydney School of Arts. From 1873 to 1877 plans for the extension of the school were carefully considered, and in 1878 the Colonial Parliament granted 2000*l.* towards the inauguration of a Technical College. In 1883 the Government decided to establish a State system of technical education in New South Wales, and having carefully examined the scheme of the City and Guilds of London Institute, and compared it with what was being done on the continent of Europe, they decided that the course of study and system of instruction to be adopted in their college should "accord with the practice of the City and Guilds of London Institute, with such modifications as seemed necessary to meet local requirements and appliances." "Following out the principle laid down by the City of London Guilds for their own guidance, the Board of Technical Education resolved that the object of technical instruction in the colony would be to improve the industrial knowledge of workmen by teaching the sciences and principles underlying their handicraft, and that such teaching should be illustrated by the best apparatus and machines that can be obtained, and by visits to workshops, manufactories, &c." No sounder views than these could be expressed. In 1884 the Parliamentary vote for technical education had increased to 17,093*l.* 3*s.* 4*d.*, and more than forty classes were in operation at the College. These figures indicate the great advance that has been made. As now organised, the College contains thirteen departments, viz., Agriculture, Applied Mechanics, Art, Architecture, Geology, Chemistry, Commercial Economy, Mathematics, Music, Elocution, Pharmacy, Physics, and Domestic Economy. Some of these subjects are outside the curriculum of our own Technical Colleges; but there is much to be said in favour of the introduction of some non-scientific subjects into a technical course; and where statesmanship is almost a profession the study of elocution in early youth is of distinct advantage. The average number of students in the College during the past session has been 917, and the fees paid by the students amounted to 1838*l.*

For the benefit of artisans engaged in the building-trades, classes have been established in decoration, plumbing, bricklaying, wood-carving, carpentry, and joinery; and in many of those classes the syllabus of instruction is identical with that in use at the Finsbury Technical College. Recently, the Council of the City Guilds Institute have received an application to extend their technological examinations to the colony, and to award certificates and prizes on the results. This application is at present under the consideration of a Committee of the Institute. There can be no doubt that all efforts to bring the colonies and mother country into closer relationship should be encouraged, and the more the colonial system of education is assimilated to our own, the greater will be the sympathy between the colonists and the inhabitants of the United Kingdom. This sympathy is of greater advantage to our commercial interests than is generally supposed; for it tends to link together the colonies and the mother country into one vast empire, the several parts of which will depend upon one another rather than upon foreign markets for the supply of their various wants.

It is to be hoped that the example of New South Wales will be followed by Victoria, and may extend to New Zealand and to other parts of our colonial empire. The advancement of technical education in our colonies is to us a matter only second in importance to the improvement of the means of technical instruction in our own manufacturing towns; and it must be a source of satisfaction to the City and Guilds of London Institute that the influence of its operations is being felt, not only in the centres of our home industries, but already in one of the most flourishing of our colonies.

SEEBOHM'S HISTORY OF BRITISH BIRDS¹

SINCE our last notice of Mr. Seebohm's book (*NATURE*, vol. xxviii. p. 126) the author has brought it to a successful conclusion, and has fully sustained his reputation as an original and painstaking writer. The great defect in our standard works on British birds has been a want of originality, as one author after another, and one editor after another, have compiled books on the subject, each one founded on the labours of their predecessors, so that the best books have been but compilations. Mr. Seebohm has started on quite a different principle, and the greatest charm of his book consists in the account of the life and habits of the birds, drawn from his own actual experience of the species in their native haunts. And before giving to the world his varied experiences, he has, as is well known, travelled extensively in Europe and Northern Asia, and has become celebrated as the discoverer of the breeding-places of many species of European birds, previously unknown. In this respect he resembles the late John Wolley, for whom a fellow-feeling of sympathy is expressed by Mr. Seebohm throughout his work, but, more fortunate than that well-known naturalist, our author has survived to record in his own books the results of his successful expeditions. It must not, however, be supposed that Mr. Seebohm, in giving us detailed accounts of the life of the birds, has neglected in any way the scientific portion of his task. On the contrary, he has grappled with this difficult subject in a manner which is highly creditable, and however divided opinions may be as to the advisability of some of the changes of nomenclature which he introduces, there can be no question as to the greater simplicity which he has once more attached to the names of the British birds, and we believe that he will be largely followed. Some revision of the code of rules proposed by the British Association appears to us to be necessary, and we trust that ere long Mr. Seebohm or some other ornithologist will draw out a scheme for their modification, in order to bring them into harmony with the more advanced state of science of the present day; and an attempt to arrive at a definite understanding with our Continental and American brethren as to the employment of a uniform system of nomenclature ought soon to be made. The opportunity may probably come when the authoritative "List of North American Birds" is promulgated by the American Ornithologists' Union, a work which is anxiously awaited by naturalists in this country, and it will then be competent for us to consider the merits and demerits of the trinomial system of nomenclature which is gaining ground considerably on this side of the water, but which cannot be adopted without the utmost consideration. Mr. Seebohm does not hesitate to adopt it, but how far he will be followed remains to be seen.

We can cordially recommend this book to all lovers of ornithology, both at home and abroad, and to young and old alike, for they will find ample material for study, and a very great deal that is new. It is by far the best introduction to a knowledge of British birds that we are acquainted with, and a great deal of the subject-matter is very original. The criticisms of contemporary ornithologists are occasionally somewhat hard, but no one can complain of a want of candour on the author's part, and as he no doubt expects equally hard hitting in return, he must have counted the cost before striking at the authors who so often arouse his ire. One thing we do not clearly understand, and that is the constant odium thrown by Mr. Seebohm upon the "Ibis List of British Birds" compiled by a Committee of the B.O.U., of which the author was himself a member. A long time was spent by this Committee in investigating the subject, and as its conclusions were carried by a majority of votes, all the members

¹ "A History of British Birds; with Coloured Illustrations of their Eggs." By Henry Seebohm. Vols. I. to VI. (London: R. H. Porter, 1883 to 1885.)

of the Committee ought to acquiesce in its decisions. We ourselves do not agree with every point of the Committee's work, but at the same time the "List" supplied a great want in ornithology in this country, and it will, no doubt, be greatly improved in a second edition.

Oologists in this country have in Mr. Seebohm's work a thoroughly good hand-book, the figures of the eggs being highly satisfactory, while as to the information concerning the nesting-habits and life of the birds, we believe this "History of British Birds" to be by far the most complete yet published in this country. R. B. S.

NOTES

THE collection of funds for the Pasteur Hospital is proceeding rapidly. The total of the first list is a little under 10,000*l*.

IN reply to a recent letter from the Russian Minister of Education, M. Pasteur has written offering to receive Russian doctors for instruction, and suggesting that Russia should contribute towards the establishment of his proposed Institution at Paris. A small establishment for the application of M. Pasteur's method against rabies has already been started in St. Petersburg, on the initiative and at the expense of Prince Alexander of Oldenburg, where experiments on rabbits and dogs are now being made, preparatory to the treating of persons in danger of hydrophobia.

IN the House of Commons, last week, in reply to a question by Sir Henry Roscoe, Mr. Chamberlain stated that his attention had been called to the reported discovery by M. Pasteur of a cure for hydrophobia. The recognised eminence of M. Pasteur as a scientific investigator, and the great interest and importance which attach to the subject of his recent inquiries, seemed to him to justify a careful and impartial examination of the results obtained. At present the information on the matter in the possession of his department was too vague and incomplete to afford materials for a full appreciation of M. Pasteur's process. Mr. Chamberlain promised to consider how such an inquiry can be most satisfactorily conducted, and to confer with the Chancellor of the Exchequer with reference to the question of the expense. He hoped to be able to arrange for such an investigation as may enable a just estimate to be formed as to the reliability of M. Pasteur's method and its applicability to this country.

THE French Minister of Public Instruction has applied to the French Parliament for a grant of about 150,000*fr*. for the building of an equatorial-coude according to the Lœwy system. The total sum required will be 100,000*fr*. more.

AT the last meeting of the Berlin Anthropological Society Prof. Virchow stated that the German Colonial Society had sent circulars to all European colonies situated in the tropics, requesting observations to be made regarding the question of the acclimatisation of Europeans in the tropics, the result of this inquiry to be communicated to the German Naturalists' Association at their next annual meeting in September. An exhibition of objects required in fitting out scientific travellers for their journeys will also be held at the same time as the meeting of German naturalists.

THE Ben Nevis Weather Reports chronicle an extraordinary dryness of the air in the end of last week. From 3 a.m. of Thursday the air became so dry that a humidity of about 15 per cent. was maintained for some time, and the dew-point fell to -24°O . On Friday the humidity was about 13 per cent. till 3 p.m., when the air became still drier, and at 9 p.m. the humidity was only 8 per cent., the readings at this hour being: dry bulb, $19^{\circ}\cdot 2$, and wet bulb, 13°O . The great dryness ceased

at midnight, when the air suddenly became saturated. The snow lying at the Observatory at present is not much more than half the quantity of the two previous winters at this season.

It is reported that on Sunday night, about 11 o'clock, a sharp shock of earthquake, lasting seven seconds, caused a panic at the theatre in Granada. The audience rose, and rushed into the streets. The inhabitants, awakened by the shock, poured out of their houses, and many persons remained in the streets and squares part of the night. Very little material damage was done to the houses, and none to the public buildings, for the preservation of which the authorities have adopted precautions. The shocks were oscillatory from west to east, and accompanied by a rumbling noise. The shock was felt also in the districts which were the scene of the earthquake of 1884. The villagers were terribly alarmed, and some houses were injured.

A VIOLENT shock of earthquake was felt at Wiesbaden at twenty-eight minutes past midnight on Sunday.

THE fourth volume of Dr. M. C. Cooke's "Illustrations of British Fungi" is just completed, bringing the total number of coloured plates up to 622, illustrating 790 species and varieties of *Agaricus*, or more than double the number figured by Fries in his "Icones," and nearly as many as there are in the combined works of Sowerby, Hussey, Bolton, Bulliard, and Krombholz. It is estimated that the two volumes yet to be published, if the author receives sufficient support, will contain about 400 additional species, making a total of nearly 1200 species and varieties of the gill-bearing *Fungi*, or nearly three times as many as in any other work in existence. The four volumes accomplished represent five years' laborious work and a great expenditure of money by the author, who is publishing at his own sole cost; yet we are assured that he has not only derived no profit therefrom, but has suffered a loss, and this in spite of his having saved the expense of an artist. Surely there must be a sufficient number of persons in this country interested in botany to render such a work self-supporting, if not remunerative; especially as the price is about half that of contemporaneous Continental works on the same subject. Dr. Cooke, in response to numerous solicitations, also proposes issuing a volume of coloured plates of British Desmids as a supplement to his "British Fresh-Water Algæ," provided a sufficient number of subscribers come forward.

NEAR the village of Dorndorf (Prussian province of Nassau) considerable alarm has recently been caused by the repeated appearance of extensive fissures in the surface of a hill. Quite lately the main fissure has advanced to within 100 metres of the village, at which point it, however, turned aside, seemingly returning to its starting-point. Subsidence of the soil has also been noticed in several parts of the circumscribed area, which measures about a mile in diameter.

THE climate of Lucerne has been described by Herr Suidter (in a recent address there) on the basis of five years' observations at Mariahilf. Lucerne, he says, is in the föhn-climate, but on the outer edge of its zone (the föhn being, it is known, a strong, warm, descending wind of southerly direction in Switzerland). The former is proved by the preponderance of warm winds and the large rainfall (average 1275·8 mm. in 1879-83) compared with Central Switzerland, the latter by the low mean annual temperature ($8^{\circ}\cdot 284\text{ C.}$), and by a much less rainfall than places near the source of the föhn, such as (in descending order) Rigi-kulm, Vitznau, Schwyz, and Engelberg; where the föhn blows much oftener and more continuously and strongly. A peculiar green tinge of the sky's blue over the Uri or Obwaldner Mountains tells the Lucerners of the föhn's coming, some 12 to 24 hours in advance. Drenching rain nearly always comes with it. The lowest temperature in those five years was -17° C. (in 1879); but years often pass without